

UNDERSTANDING STAKEHOLDERS PERCEPTION TOWARDS WILDLIFE OF BLACK BUCK SANCTUARY OF TAL CHHAPAR, CHURU, RAJASTHAN, INDIA

Anju Ojha

Assistant Professor, Dept. of Geography, Govt. Lohia College, Churu, Rajasthan, India
Email: draj2280@gmail.com

Abstract: *Nature conservation is often understood to happen only within the limited boundaries of protected areas, managed by government agencies. These are conceived as islands of conservation where any form of human intervention is considered harmful for conservation. There are Protected Areas intended for conservation of wildlife, which are proving to be islands of conservation. The Protected Area approach keeps local people away from benefits of conservation and imposes cost of conservation on them, banishing their fundamental rights, resulting into hostility of local community towards conservation affecting the whole goal of conservation. The rapid growth in world's population and indiscriminate use of natural resources are a consequence of land erosion, over fertilization and problems of preserving forests, and wildlife. The assessment of ecological changes and of the beneficial use of land, water and air resources requires collective wisdom. Given the current rate of increasing depletion of natural resources, the growing problems of ecology might well become a major source of 'internal strife'. Therefore, newer ways of conservation and promotion of wild life, and their distribution need to be evolved. The paper highlights understanding stakeholder's perception towards wild life.*

Key words: Stakeholders, Perception, Wild Life, Black Buck, Conservation.

Introduction

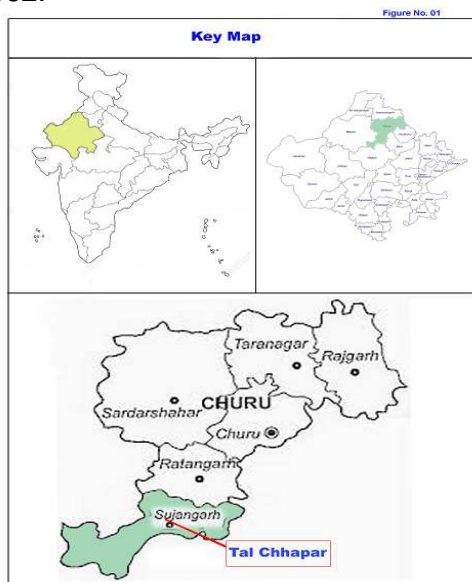
The Wildlife (Protection) Act had little to encourage or mandate peoples' participation in conservation, or to recognize areas conserved by communities. Two new categories of Protected Areas were introduced into the Wildlife (Protection) Amendment Act of that year, namely Conservation Reserve and Community Reserve. Acknowledging the fact that peoples' participation and traditional management systems have enormously contributed to forest and wildlife conservation in India, such a new direction to conserve patches as people conserved Protected Areas carried lot of meaning. It was expected that having declared certain areas as Conservation Reserves and Community Reserves and building up institutions around such Reserves for better protection and management there would be new learning for forest and wildlife management. India is one of the 17 mega diverse countries of the world. With only 2.4 percent of the world's land area, 16.7 percent of the world's human population and 18 percent livestock, it contributes about 8 percent of the known global biodiversity, however, putting enormous demands on our natural resources. India is known for its rich heritage of biodiversity. It is one of the recognized mega diverse countries of the world. With an area of about 329 mha, India is seventh largest country in the world. India, a mega diversity country with only 2.4 percent of the land area and 4 percent of fresh water, accounts for 7-8 percent of the recorded species of the world. So far, 45,968 species of plants and 91,364 species of animals have been documented. At the global level, 2,78,900 species of microorganisms have been described so far, out of the estimated 3.75 million extant species.

There has been increasing realisation that forests provide numerous benefits to mankind including improvement of the quality of environment. Forests provide goods and services and maintain life support systems like timber, fuel wood, fodder, and a wide range of non-timber products. Further, forests are a source of natural habitat for biodiversity and repository of genetic wealth; provide means for recreation and opportunity for eco-tourism. In

addition, forests help in watershed development, regulate water regime, conserve soil, and control floods. They contribute to process of carbon sequestration and act as carbon sink, which is important for reduction of greenhouse gases and global warming. In ecologically sensitive areas like mountains, as well as river catchments, forests play an important role for prevention of floods, etc. Degradation of forest resources has a detrimental effect on soil, water and climate, which in turn affects human and animal life. This has created global concern for protection and preservation of forests. It is important to recognize that the benefits of natural forests are rather different than man-made forests. The ecological benefits of natural forests are difficult to replicate in a man-made forest. Functions like carbon-sequestration, would depend on topography, soil conditions, density of forests, etc. The functions of forests both for the natural system as well as the social dimensions can be briefly seen in the following statement. It may be mentioned that while natural forests provide for all these functions, only some of these benefits may arise from man-made forests.

Tal Chhappar Sanctuary

The sanctuary lies in the Sujangarh Tehsil which is located in the north eastern part of the Thar desert at a latitude 27° 42' north and longitude 74° 20 ' east at a height of about 286.6 meters from mean sea level. The sanctuary lies on Nokha-Sujangarh state highways at a distance of 85 km. from Churu, 160 km. from Bikaner and 200 km. from Jaipur. Tal Chhappar Sanctuary is a sanctuary located in the Churu district of north western Rajasthan in the Shekhawati region of India. The nearest railway station is Chhappar which lies on Degana-Churu-Rewari broad gauge line of north western railways. It is known for black bucks and is also home to a variety of birds. Total area of this black buck sanctuary is of 719 hectare which lies on both side of Chhappar-Sujangarh road. It is surrounded by Gopalpura, Tal Chhappar (Town), Chadwas, Soorwas, Dewani, Rampura villages. The Tal Chhappar was declared 'Reserved Area' for the protection of wild animals and birds in 1962. Over 2492 black bucks are found in almost tree less saline flat land of Tal Chhappar sanctuary. Tal Chhappar was declared a "Reserved Area" for the protection of wild animals and birds in 1962.



Objective

The objective of the present study is to find out understanding and perceptions of villagers towards wild life of black buck sanctuary.

Methodology

In order to make the study comprehensive and more analytical, both empirical and statistical methodologies have been applied for different aspects of the study. The present work has been conducted with the following methods:

- Collected primary data through sample field survey and personal observation of nearby villages. Interview through questionnaire in which the questions were framed specially to study the population, environment and development issues. For this 15 sample villages have been studied.
- At the micro level the study has been done on the basis of questionnaire by personal interview method with the villager and farmers. About 25 percent of household were interviewed from each village. Thus 2000 respondents were interviewed in all 15 villages.

Population of Surveyed Village

The detailed survey was conducted in all 15 villages of the sanctuary area nearby village. Total population in all 15 villages is 42946. Out of which 21824 are male and 21122 are female. The numbers of household are 6981 in all 15 villages. The highest populated village is Chadwas i.e. 6945 persons. The lowest populated village is Upadhiya i.e. 389 persons. The following table shows the population structure of surveyed villages.

Table 1: Population of Surveyed Village of Sujangarh Tehsil, 2011

#	Village Name	Male	Female	Total Population	No. of Households
1.	Benath Umji	369	341	710	110
2.	Benatha Jogliya	1086	1044	2130	341
3.	Bidas	207	194	401	65
4.	Bothiyabas	803	876	1679	276
5.	Chadwas	3440	3505	6945	1204
6.	Dewani	894	957	1851	315
7.	Dhatri	1632	1537	3169	523
8.	Dunkar	1974	1816	3790	529
9.	Gopalpura	3154	3002	6156	983
10.	Jaitasar	2852	2779	5631	943
11.	Jogliya	2688	2515	5203	798
12.	Rampur	666	629	1295	212
13.	Randhisar	1416	1318	2734	481
14.	Soorwas	445	418	863	143
15.	Upadhiya	198	191	389	58
	Total	21824	21122	42946	6981

Source: Collected from Gram Panchayat Office

Literacy

As per district census 2011 the literacy level of the Sujangarh tehsil is 60.79 percent among rural areas and 77.73 percent among in urban areas. The following table shows the details of the literacy level.

Table 2: Literacy level in Sujangarh Tehsil - 2011 (percent)

Area	Male	Female	Total
1. Rural	73.91	47.07	60.79
2. Urban	81.58	59.42	77.73

Source: District Statistical Abstract, 2015

Socio Economic Condition

At present people living around the sanctuary mainly depend upon the agricultural, animal husbandry and mining as major source of livelihood. Due to non-availability of agricultural facilities and saline underground water they depend upon rains. The rains are highly erratic and uncertain and in past the subsequent droughts have shaken their economy. The land holdings are of moderate size but less rainfall and salinity of area restrict. The land in the area is mostly plane but not very much fertile and hence unfit for agriculture. The people generally take one crop during rains i.e. Bajra, Moth, Moong, Guwar etc. The people keep their uncultivated land as a grass land for their cattle. Salt is manufactured and exported

from salt lake. This is also source of Income for the villagers which are sending out of the area. In addition to this edible oil is exported whereas cement is imported. The sanctuary is surrounded by Chadwas, Soorwas, Dewani, Rampura, villages among these villages Tal Chhappar is a town having basic amenities for the population. Bajra and wheat are main stable food.

Local Climate Suitability

The following table shows the local climate suitability for black bucks. The total numbers of respondents were 2000 from 15 village of Sujangarh tehsil. Most of villages are situated surrounding the sanctuary. About 69.50 percent male and 54.70 percent female respondents reported that local climate is suitable for black bucks. Whereas 12.90 percent male and 16.40 percent female respondents reported that local climate is not suitable for black buck. On the other hand 17.60 percent male and 28.90 percent female were reported that they don't know about the climate suitability for black bucks. If we go for total respondents response it comes 62.10 percent male are positive, 14.65 percent respondents are negative and 23.25 percent respondents don't have any idea about the climate suitability for black bucks. It is clear from the table that 62 percent people are aware about the climate suitability. But 23 percent respondents were didn't know about the climate suitability for black bucks. Even they were not able to link between black buck and climate suitability.

Table 3: Local Climate Suitability for Black Buck

Category	Response Number			Response percent		
	Male	Female	Total	Male	Female	Total
Yes	695	547	1242	69.50	54.70	62.10
No	129	164	293	12.90	16.40	14.65
Don't Know	176	289	465	17.60	28.90	23.25
Total	1000	1000	2000	100.0	100.0	100.0

Source: Based on field survey

Physiographic Suitability:

Table number 4 shows physiographic suitability for black bucks in the sanctuary. About 58.30 percent respondents reported that physiographic is suitable for black bucks in the sanctuary area. Whereas 15.50 percent said that physiographic is not suitable for the black buck. On the contrary 26.20 percent respondents reported they don't know about the physiographic suitability for black buck. Whereas if we compare male and female responses it is noticed that female members of this area are less aware than male members.

Table 4: Tal Chhappar Physiographic Suitability for Black Buck

Category	Response Number			Response percent		
	Male	Female	Total	Male	Female	Total
Yes	689	477	1166	68.90	47.70	58.30
No	172	138	310	17.20	13.80	15.50
Don't Know	139	385	524	13.90	38.50	26.20
Total	1000	1000	2000	100.0	100.0	100.0

Source: Based on field survey

People's Awareness about notified black buck sanctuary:

Table 5 shows about people's awareness about notified black buck sanctuary by government. About 67.70 percent male and 17.80 percent female respondents were aware about notified area of Tal Chhappar sanctuary. About 14.50 percent respondents don't know government notification. It is clear from the table that female members are less aware about the government notification but male members are more aware about government notification.

Table 5: People's Awareness about notified Black Buck Sanctuary by Government

Category	Response Number			Response percent		
	Male	Female	Total	Male	Female	Total
Yes	732	622	1354	73.20	62.20	67.70
No	173	183	356	17.30	18.30	17.80
Don't Know	95	195	290	9.50	19.50	14.50
Total	1000	1000	2000	100.0	100.00	100.0

Source: Based on field survey

Knowledge about types of Plants in Sanctuary Area

Table 6 reflects about the people's knowledge regarding different kinds of plants available in the sanctuary area. About 67.70 percent respondents reported that they are well known about the plants available in the sanctuary area. The male and female are both very well aware about the plants available in the sanctuary area. Whereas 23.80 percent respondents don't know the variety of plants available in the sanctuary area. Apart from this 8.50 percent respondents reported that they don't know anything about this.

Table 6: Knowledge about Types of Plants in Sanctuary Area

Category	Response Number			Response percent		
	Male	Female	Total	Male	Female	Total
Yes	721	633	1354	72.10	63.30	67.70
No	214	262	476	21.40	26.20	23.80
Don't Know	65	105	170	6.50	10.50	8.50
Total	1000	1000	2000	100.0	100.0	100.0

Source: Based on field survey

Increasing Black Buck Population

Table 7 depicts about the increasing number of black bucks in the sanctuary. In this regard the results are very specific. About 44.75 percent respondents said those populations of black bucks are increasing. Whereas 30.10 respondents thought that black bucks population are not increasing. On the contrary 25.15 percent respondents have no idea about the increasing black buck population.

Table 7: Increasing Black Buck Population

Category	Response Number			Response percent		
	Male	Female	Total	Male	Female	Total
Yes	498	397	895	49.80	39.70	44.75
No	364	238	602	36.40	23.80	30.10
Don't Know	138	365	503	13.80	36.50	25.15
Total	1000	1000	2000	100.0	100.0	100

Source: Based on field survey

Spatial Terrain Affects the Freely Walking of Black Buck

The spatial terrain also affects the freely walking of black buck in the sanctuary area. The following table shows the respondents related to free walking of black buck in the sanctuary. About 28.90 percent respondents reported that the terrain of the area affects the free movements of the black buck. Whereas 38 percent respondents reported that the terrain of the area don't affects the free movement of the black buck. Apart from this 33.10 percent respondents point out that they don't have any idea about this. It may be affected or may not be affected the free movement of the black buck in the sanctuary area. The details are given in the following table.

Sufficient Greenery

The greenery is basic requirement of the any wild life ecosystem. Without sufficient greenery wild life ecosystem will not survive naturally. The table number 10 shows sufficient greenery available in the sanctuary. About 39 percent respondents reported that the greenery is sufficient for the sanctuary's wild life. On the other hand 40.60 percent respondents reported

that the greenery is not sufficient for wild life. It should be increased in a proper manner as per local environment and need. Especially in the summer season these black buck of the sanctuary faces many severe problems. Whereas 20.35 percent respondents said that they don't have any strong idea about this. They said that they don't know anything in this regards.

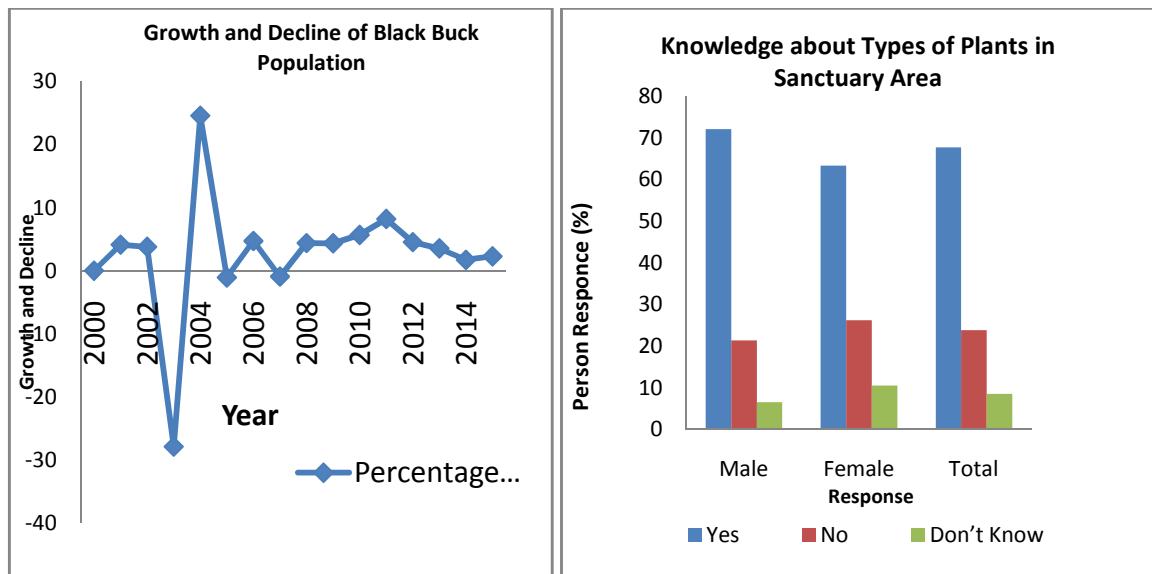


Table 8: Spatial Terrain Affects the Freely Walking of Black Buck

Category	Response Number			Response percent		
	Male	Female	Total	Male	Female	Total
Yes	346	232	578	34.60	23.20	28.90
No	368	392	760	36.80	39.20	38.00
Don't Know	286	376	662	28.60	37.60	33.10
Total	1000	1000	2000	100.0	100.0	100.0

Source: Based on field survey

Table 9: Greenery is Sufficient for Survival of Black Buck

Category	Response Number			Response percent		
	Male	Female	Total	Male	Female	Total
Yes	427	354	781	42.7	35.40	39.05
No	380	432	812	38.0	43.20	40.60
Don't Know	193	214	407	19.3	21.40	20.35
Total	1000	1000	2000	100.0	100.0	100.0

Source: Based on field survey

Extra Fodder during Summer Session

Table number 10 shows about the fodder facility provided by sanctuary staff. The result shows that only 9.50 percent people are agreed that staff provide extra fodder during summer. The result is very disappointing. Because 50.10 percent respondents reported that they don't provide extra fodder during summer session. This must be checked otherwise it will affect the wild life animal health in negative way. Apart from this 40.40 percent respondents have no any idea whether they provide fodder in summer season because in the summer temperature goes up to 50⁰ C. In this time it is very hard to survive without sufficient fodder.

Sufficient Water Facility

Table 11 shows the water facility provided by forest department during summer season. About 32.10 percent respondents reported that sufficient water facility provided by sanctuary staff. On the other hand 35.15 percent respondents reported that sufficient water facility has not been provided by sanctuary staff. About 32.75 percent respondents remarked that they

don't have any idea whether sanctuary staff provides sufficient water or not. The details are given below.

Table10: Extra Fodder during Summer Session

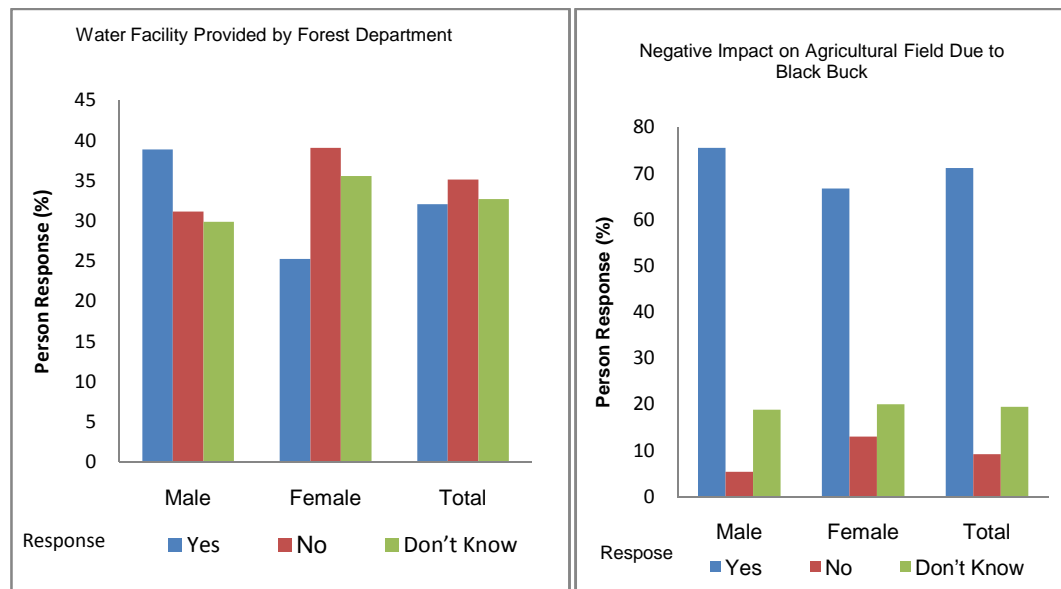
Category	Response Number			Response percent		
	Male	Female	Total	Male	Female	Total
Yes	152	38	190	15.20	3.80	9.50
No	472	530	1002	47.20	53.0	50.10
Don't Know	376	432	808	37.60	43.20	40.40
Total	1000	1000	2000	100.0	100.0	100.0

Source: Based on field survey

Table 11: Sufficient Water Facility Provided by Forest Department

Category	Response Number			Response percent		
	Male	Female	Total	Male	Female	Total
Yes	389	253	642	38.9	25.30	32.10
No	312	391	703	31.2	39.10	35.15
Don't Know	199	356	655	29.9	35.60	32.75
Total	100	1000	2000	100	100.0	100.0

Source: Based on field survey



Hunting Activities

The wild life hunting is completely banned in the state. Though the following table shows that there are still some illegal hunting prevails in some areas of black buck sanctuary. Only 5.35 percent respondents reported that hunting activities are continuing in some part of the sanctuary. Whereas 52 percent respondents reported that there is any hunting activities carried out in the sanctuary area. It is also noticeable that 42.65 percent respondents have no idea about hunting activities in the sanctuary area. The details are given in the following table.

Table 12: Hunting Activities in Sanctuary Area

Category	Response Number			Response percent		
	Male	Female	Total	Male	Female	Total
Yes	085	022	107	08.50	02.20	05.35
No	529	511	1040	52.90	51.10	52.0
Don't Know	386	467	853	38.60	46.70	42.65
Total	1000	1000	2000	100.0	100.0	100.0

Source: Based on field survey

Negative Impact on Agricultural Field

The following table shows that there are tremendous negative impacts on agricultural fields of surrounding villages of the sanctuary. The fencing of the sanctuary area is not proper. Due to this some black bucks go outside the boundary area and enter in agricultural fields. About 71.20 percent respondents reported that there are negative impacts due to black buck entry in the agricultural fields. Only 9.30 percent respondents said that there are no any negative impacts due to black bucks. About 19.50 percent respondents didn't have any idea whether negative or positive.

Table 13: Negative Impact on Agricultural Field due to Black Buck

Category	Response Number			Response percent		
	Male	Female	Total	Male	Female	Total
Yes	756	668	1424	75.60	66.80	71.20
No	55	131	186	5.50	13.10	9.30
Don't Know	189	201	390	18.90	20.10	19.50
Total	1000	1000	2000	100.0	100.0	100.0

Source: Based on field survey

Eco-Development and Building Partnership with People

Tal Chhapar sanctuary is unique not only for the presence and significant number of Blackbuck population but from the point of cooperation of the villagers imparted for the wellbeing of the wild life inhabiting the sanctuary. It is a well-known fact that during lean period of summer food and water availability in the sanctuary becomes rare. This compels the herbivores to migrate to the neighboring agriculture and private or common pasture land belonging to the villages. The weak animals can fall an easy prey to the stray dogs. Naturally no villagers can afford sharing the precious fodder and water resources of his cattle with wild life, in that harsh climate condition of the Thar desert. The villagers also push away wild animals from their field but still do not kill them. It is very important to ensure cooperation of these villagers for future, times as well through eco- development activities in these villages. Therefore it is suggested that following should be taken up.

1. Entry point activities like:
 - a. Construction of common meeting platform
 - b. Construction of small school building or medical dispensary building
 - c. Construction of panchayat bhawan
 - d. Construction of community water pond
 - e. Construction of khurrahs, drainage lines etc.
 - f. Desalting of ponds.
2. Formation of Eco-Development committees.
3. Distribution of seedlings of fruit bearing, fodder value and shady plant to individual farmers for planting on their personal lands.
4. Holding veterinary campus at villagers and providing medicines for vaccination against epidemic disease.
5. Organising cinema shows on forest/wild life/ environmental subject.
6. Distribution of solar cookers. Solar lanterns/L.P.G. connections.
7. Distribution of smokeless chulhas.
8. Other low cost miscellaneous activities to generate goodwill towards the cause of wild life conservation.
9. The Tal Chhapar Township can always play an important role in the protection and development of the sanctuary. Therefore it is proposed to build a real partnership with the residents of Chhapar Town. Regular meeting should be held with them to share the problems of the reserve and thus cooperation should be sought in shooting these problems.

Conclusion

There are number of problems identified and their suggestions are given here. A better environment is a vital input for our growth and survival. Environmental pollution affects the quality of life and imbalance the ecology, thereby disturbing the food chain. Floods and

droughts, desertification of fertile lands, increase in the incidences of illness are some of the symptoms of bad environment in different parts of the country. The greenhouse effect, global warming and depletion of the ozone layer are the possible damages, likely to be caused on the earth, due to environment pollution. If the pollution continues unchecked at this rate, a time may come when the planet may become unfit for living. The nature teaches us that the world of living things. Plants and animals remain embedded in their environment as a very well knit system functioning under the dictates of the laws of nature. The integrated system is called as ecosystem but for last time man is losing the benevolence and blessing of nature. The dawn of industrial civilization is characterized by exploitative relationship of men with nature, resulting poverty and pollution. Since the set of Tal Chhapar Sanctuary, adequate attention minimizes or to solve the problems has not been paid. For example proper staff to look after this sanctuary, availability of sufficient water, providing fodder, protection of the sanctuary from encroachment etc. Therefore, to solve this problem will be discussed separately. The main problems of the sanctuary area are - At presents the spreading up of p. Julie flora throughout the Sanctuary area is a big problem. This causes the problem for wild animals. The specified grasses or local grasses which are primary food for Black buck are reducing day by day.

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